

Section 6: Evolution

In section 6 of your second semester map, you will draw or write everything that you know about the basic principles of Evolution. You should at least answer all of the following questions:

1. Define genetic equilibrium. Can genetic equilibrium ever exist? What are the Hardy-Weinberg principles that prevent a population from maintaining genetic equilibrium? (Population genetics) Define how each of these principles prevents genetic equilibrium and give examples of each. If a population maintains genetic equilibrium, will evolution take place?
2. Define species. In order for two organisms to belong to the same species what must they have in common.
3. Define speciation. What are the 6 factors that must take place in order for speciation to be successful? Define each of these factors and completely explain using these 6 factors, a situation where two organisms might separate into two separate species.
4. How does the movie “Real Eve” relate to evolution? How does the movie “Real Eve” explain how humans became to inhabit North America? How can you explain how human look different? Europeans v. Africans v. Asians? What would you expect would happen to the human species if humans never invented transportation methods that easily allow us to bridge gaps between human populations, such as airplanes, boats, trains and cars?
5. In the section separating 5 and 6, explain how Evolution relates to the 4 sections above.
6. In the section between 6 and 1, explain how this relates to DNA.